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ORBIT: an optimizing compiler for scheme

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↑ REFERENCES

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Rabbit: A Compiler for Scheme

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Author [Guy L. Steele, Jr.](#)

Publisher Massachusetts Institute of Technology Cambridge, MA, USA

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↑ **ABSTRACT**

We have developed a compiler for the lexically-scoped dialect of LISP known as SCHEME. The compiler knows relatively little about specific data manipulation primitives such as arithmetic operators, but concentrates on general issues of environment and control. Rather than having specialized knowledge about a large variety of control and environment constructs, the compiler handles only a small basis set which reflects the semantics of lambda-calculus. All of the traditional imperative constructs, such as sequencing, assignment, looping, GO TO, as well as many standard LISP constructs such as AND, OR and COND, are expressed as macros in terms of the applicative basis set. A small number of optimization techniques, coupled with the treatment of function calls as GO TO statements, serves to produce code as good as that produced by more traditional compilers.

↑ **CITINGS 3**

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